

AMENDMENTS TO THE CLAIMS

1-66. (Canceled)

67. (Currently Amended) A signal transmission system comprising:

a first transmission member having a first length and an impedance less than 100 ohms, ~~said first transmission member including a transmission medium;~~

a second transmission member having a second length, ~~said second transmission member including said transmission medium;~~

a first and a second signal source respectively having first and second signal outputs respectively coupled to said first and second transmission members;

a termination circuit connected to at least one of said first transmission member and said second transmission member; and

an impedance adjusting component coupled to said second transmission member and adapted to affect, by said coupling thereto, a signal propagation factor of said second transmission member, whereby a relationship may be established between respective transmission times through said first and second transmission members of first and second signals received at said first and second transmission members from said respective first and second signal source outputs.

68. (Previously Presented) A signal transmission system as defined in claim 67 wherein said impedance adjusting component comprises:

an electrical inductor.

69. (Previously Presented) A signal transmission system as defined in claim 68 wherein said electrical inductor comprises a spiral inductor.

70. (Previously Presented) A signal transmission system as defined in claim 67 wherein said impedance adjusting component comprises:

a material having a magnetic permeability, said material adapted to be incorporated into said second transmission member.

71. (Previously Presented) A signal transmission system as defined in claim 67 wherein said impedance adjusting component comprises:

an electrical capacitor.

72. (Previously Presented) A signal transmission system as defined in claim 67 wherein said relationship established between respective transmission times comprises equalization of said respective transmission times.

73. (Previously Presented) A signal transmission system as defined in claim 67 wherein said first length is different from said second length and said respective transmission times through said respective first and second transmission members are equal.

74. (Currently Amended) A signal transmission system as defined in claim 67 wherein said first transmission member is formed of a transmission medium ~~comprises~~ comprising an electrical transmission medium.

75. (Previously Presented) A signal transmission system as defined in claim 74 wherein said electrical transmission medium comprises a first conductor, a second conductor, and a dielectric material disposed between said first conductor and said second conductor.

76. (Previously Presented) A signal transmission system as defined in claim 75 wherein said electrical transmission medium comprises:

a first conductor;

a second conductor; and

an evacuated region disposed between said first conductor and said second conductor.

77. (Currently Amended) A signal transmission system as defined in claim [[67]] 74 wherein said electrical transmission medium comprises first and second conductors disposed in a coaxial relationship to one another and a dielectric medium disposed between said first and second conductors.

78. (Currently Amended) A signal transmission system as defined in claim 67 wherein said first transmission member is formed of a transmission medium ~~comprises~~ comprising an optical transmission medium.

79. (Previously Presented) A signal transmission system as defined in claim 67 wherein said impedance adjusting component comprises a plurality of capacitors coupled to said second transmission member at a respective plurality of coupling points.

80. (Previously Presented) A signal transmission system as defined in claim 67 wherein said first and second signals comprise first and second digital signals.

81. (Previously Presented) A signal transmission system as defined in claim 67 further comprising:

first and second signal receivers coupled to said first and second transmission members at respective first and second signal inputs.

82. (Previously Presented) A signal transmission system as defined in claim 81 wherein said first input has an input impedance substantially equal to a characteristic impedance of said first transmission member and said second input has an input impedance substantially equal to a characteristic impedance of said second transmission member.

83-85. (Canceled)

86. (Previously Presented) A signal transmission system as defined in claim 81 wherein said first receiver comprises a first input adapted to be coupled to said first transmission member and a second input adapted to be coupled to a reference signal source.

87. (Currently Amended) A signal transmission system comprising:

a first transmission member having a first length and an impedance less than 100 ohms, ~~said first transmission member including a transmission medium;~~

a second transmission member having a second length, ~~said second transmission member including said transmission medium;~~

a signal receiver having first and second signal inputs coupled to said first and second transmission members respectively;

first and second signal sources coupled to said first and second transmission members respectively;

a termination circuit connected to at least one of said first transmission member and said second transmission member for terminating at least one of said first transmission member and said second transmission member in a characteristic impedance of at least one of said first transmission member and said second transmission member; and

an impedance adjusting component coupled to said second transmission member and adapted to affect, by said coupling thereto, a signal propagation factor of said second transmission member, whereby a relationship may be established between respective transmission times through said first and second transmission members of first and second signals received at said first and inputs from said first and second signal sources respectively.

88. (Currently Amended) A signal transmission system comprising:

a first and a second signal source respectively having first and second signal outputs;

a first transmission member coupled to said first output, said first transmission member having a first length, said first transmission member ~~including a first transmission medium~~ having an impedance less than 100 ohms;

a second transmission member coupled to said second output, said second transmission member having a second length different from said first length, said second transmission member ~~including a second transmission medium~~ having a second characteristic impedance, whereby a relationship may be established between respective transmission times through said first and second transmission members of first and second signals received at said first

and second transmission members from said respective first and second signal source outputs by changing said second impedance; and

a termination circuit connected to at least one of said first transmission member and said second transmission member for terminating at least one of said first transmission member and said second transmission member.

89. (Currently Amended) A signal transmission system as defined in claim 88 wherein said first characteristic impedance depends on a magnetic permeability of a material of said first transmission ~~medium~~ member.

90-91. (Canceled)

92. (Currently Amended) A method of synchronizing first and second operations of respective first and second circuits comprising:

receiving a first signal transition at said first circuit from a first signal source through a first transmission member, said first transmission member having a first signal propagation factor and a first geometric length, said first signal propagation factor related to an impedance less than 100 ohms of said first transmission member;

receiving a second signal transition at said second circuit from a second signal source through a second transmission member, said second transmission member having a second signal propagation factor and a second geometric length, said second signal propagation factor related to a second characteristic

impedance of said second transition member, said second geometric length different from said first geometric length;

terminating said first characteristic impedance of said first transmission member and said second characteristic impedance of said second transmission member; and

receiving said first and second signal transitions at said first and second transmission members synchronously.

93. (Previously Presented) A method of synchronizing first and second operations of respective first and second circuits as defined in claim 92 wherein said receiving said first and second signal transitions at said first and second transmission members synchronously comprises receiving said first and second signal transitions at said first and second transmission members substantially simultaneously.

94. (Previously Presented) A method of synchronizing first and second operations of respective first and second circuits as defined in claim 92 wherein said second characteristic impedance depends on an impedance of at least one impedance modifying component coupled to said second transmission member.

95. (Previously Presented) A method of synchronizing first and second operations of respective first and second circuits as defined in claim 94 wherein said impedance modifying component comprises a spiral inductor.

96. (Previously Presented) A method of synchronizing first and second operations of respective first and second circuits as defined in claim 94 wherein said impedance modifying component comprises a capacitor.

97. (Previously Presented) A method of synchronizing first and second operations of respective first and second circuits as defined in claim 92 wherein said second characteristic impedance depends on a magnetic permeability of a material incorporated into said second transmission member.

98. (Previously Presented) The signal transmission system of claim 67, wherein said termination circuit terminates at least a first characteristic impedance of said first transmission member and said second characteristic impedance of said second transmission member.